C L A I M S

1. Pressure-air driven percussion device for a down-the-hole drill (1) with a hammer-piston (6) which is axially reciprocally movable in a hammer-piston chamber (18) through a driving device (9), said hammer-piston (6) in operation acting with a hammer-end (16) against an upper end (17) of a drill bit (2) which is positioned inside a chuck (3), wherein an air cushion for reducing percussive power is arranged to be formed at the hammer-end of the hammer-piston in positions where the drill bit (2) has been moved passed a predetermined distance in the percussion direction,
characterised in
- that the drill bit (2) is sealingly slidingly supported in a drill bit bushing (5), and
- that the hammer-end (16) of the hammer-piston (6) is formed so that it sealingly cooperates with the drill bit bushing (5) in said positions in order to form said air-cushion (19).

2. Percussion device according to claim 1, **characterised in that** an upper end portion (17) of the drill bit (2) is sealingly, slidingly supported in the drill bit bushing (5).

3. Percussion device according to claim 1 or 2, **characterised in that** said air-cushion is arranged to be formed in a volume (19) defined by the upper end (17) of the drill bit (2), the drill bit bushing (5) and the hammer-end (16) of the hammer-piston (6).

4. Percussion device according to any of the previous claims,

characterised in that the drill bit bushing (5) is arranged to be supported by a housing (4) of the down-the-hole drill (1).

5. Percussion device according to any of the previous claims,
characterised in that the hammer-piston chamber (18) is formed by a housing of the down-the-hole drill (1).

6. Percussion device according to any of the previous claims,
characterised in that the driving device (9) includes a leakage passage (12, 13, 14) for the pressure-air, through which a flushing position is established, wherein pressure-air is allowed to leak passed the driving device (9) in far advanced positions in the percussion direction of the hammer-piston (6).

7. Percussion device according to any of the previous claims,
characterised in that the hammer-piston (6) is provided with a central axial channel (8) which continuous in the drill bit (2) over a foot valve (7), which is fastened in the drill bit (2) and seals against the hammer-piston (6).

8. Percussion device according to claim 7,
characterised in that the air-cushion is also limited by the outside surface of the foot valve (7).

9. Down-the-hole drill (1) including a percussion device according to any of the previous claims.